



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Bureau of the Census**  
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MEMORANDUM FOR            Distribution

From:                            Cynthia Clark  
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Subject:                        Mail Implementation Strategy

I am pleased to present the executive summary of one of the evaluation studies for the Census 2000 Dress Rehearsal. The dress rehearsal was conducted in three sites — Columbia, South Carolina; Menominee County, Wisconsin; and Sacramento, California. The evaluation studies cover detailed aspects of eight broad areas related to the census dress rehearsal — census questionnaire, address list, coverage measurement, coverage improvement, promotion activities, procedures addressing multiple options for census reporting, field operations, and technology.

The executive summary for each evaluation study is also available on the Census Bureau Internet site (<http://www.census.gov/census2000> and click on the link to “Evaluation”). Copies of the complete report may be obtained by contacting Carnelle Sligh at (301) 457-3525 or by e-mail at [carnelle.e.sligh@ccmail.census.gov](mailto:carnelle.e.sligh@ccmail.census.gov). Please note that the complete copy of the following reports will not be publically released: reports regarding procedures addressing multiple options for census reporting and the Evaluation of Housing Unit Coverage on the Master Address File.

The evaluations are distributed broadly to promote the open and thorough review of census processes and procedures. The primary purpose of the dress rehearsal is to simulate portions of the environment we anticipate for Census 2000, so we can identify and correct potential problems in the processes. Thus, the purpose of the evaluation studies is to provide analysis to support time critical review and possible refinements of Census 2000 operations and procedures.

The analysis and recommendations in the evaluation study reports are those of staff working on specific evaluations and, thus, do not represent the official position of the Census Bureau. They represent the results of an evaluation of a component of the census plan. They will be used to analyze and improve processes and procedures for Census 2000. The individual evaluation recommendations have not all yet been reviewed for incorporation in the official plan for Census 2000. These evaluation study reports will be used as input to the decision making process to refine the plans for Census 2000.

The Census Bureau will issue a report that synthesizes the recommendations from all the evaluation studies and provides the Census Bureau review of the dress rehearsal operation. This report will also indicate the Census Bureau’s official position on the utilization of these results in the Census 2000 operation. This report will be available July 30<sup>th</sup>.

# **Mail Implementation Strategy**

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## EXECUTIVE SUMMARY

The purpose of this operational summary is to report various trends in the data produced by the mail implementation strategy in the Census 2000 Dress Rehearsal. We are particularly interested in basic response rates and the distribution of the receipt of forms, issues related to the blanket replacement questionnaire mailing in mailout/mailback areas, the response rates in areas targeted to receive non-English forms, and the effect on dress rehearsal response rates for housing units that were also part of the American Community Survey.

In mailout/mailback areas, the mail implementation strategy consisted of four items: an advance notice letter, an initial questionnaire, a reminder post card, and a replacement questionnaire, in that order. The initial questionnaire arrived at all housing units in the mailout/mailback universe about two and one half weeks prior to Census Day (April 18). The replacement questionnaire was mailed to all housing units just before Census Day, regardless of whether they completed and returned an initial questionnaire. In update/leave areas, Census enumerators delivered questionnaires to housing units while updating the Decennial Master Address File from the middle of March through early April.

One of the objectives of this study was the documentation of the dress rehearsal mail response rates. A response rate is defined to include in its numerator the number of housing units in the mailback universe that returned a questionnaire that was not blank. The response rate denominator includes the number of housing units in the mailback universe that were mailed questionnaires. Note that the denominator for the response rate does include housing units associated with undeliverable questionnaires and housing units that were unlikely or unable to respond such as vacant or nonexistent housing units. The overall mailback response rate in Sacramento was approximately 53.0 percent, with the short form response rate being 55.4 percent and the long form response rate being 40.7 percent. In South Carolina, the mailout/mailback response rate was 55.0 percent (56.8 percent short form, 45.6 percent long form) and the update/leave response rate was approximately 47.8 percent (50.1 percent short form, 37.1 percent long form). The update/leave response rate in Menominee was approximately 39.4 percent (40.6 percent short form, 32.4 percent long form).

While it is difficult to measure exactly the effect on mail response of the blanket replacement questionnaire mailing, we estimate that in Sacramento the improvement in response rate fell somewhere between approximately 7.5 percentage points and 14.4 percentage points. In the South Carolina mailout/mailback areas the improvement was between approximately 8.2 percentage points and 15.8 percentage points. The lower bound represents the percentage of housing units that mailed back only the replacement questionnaire. The upper bound represents the percentage of housing units that mailed back the initial questionnaire, the replacement questionnaire, or both from April 17 to May 7. It follows that in both the Sacramento and South Carolina sites the Report Card standard of a 6 percentage point increase or greater between the time of the replacement questionnaire delivery and the cut for nonresponse followup was achieved. From the ranges of increase in response rate during the time interval from April 17 to May 7, there are corresponding ranges for the decrease in the nonresponse followup workload that would have existed had the housing units not responded during this time. In Sacramento the range for the decrease in the nonresponse followup workload was from 13.7 to 23.5 percent. In

the mailout/mailback portion of South Carolina, the range for the decrease in the nonresponse followup workload was from 15.4 to 26.0 percent. Though these figures might imply that usage of the replacement mailing is an effective method for boosting response rates and reducing the nonresponse followup workload, operational considerations led to the decision not to use a replacement mailing in Census 2000.

Through May 7 approximately 40.5 percent of the housing units in Sacramento and approximately 41.2 percent of the housing units in the mailout/mailback portion of South Carolina that returned a replacement questionnaire had also returned an initial questionnaire. In Sacramento approximately 5.9 percent of the housing units (about 11.2 percent of the respondents) in the mailout/mailback universe returned both an initial and a replacement questionnaire. In the South Carolina mailout/mailback universe about 6.4 percent of the housing units (approximately 11.6 percent of the respondents) returned both an initial and replacement questionnaire. Of those housing units that returned both an initial and a replacement questionnaire, about 86.2 percent in Sacramento and 88.0 percent in South Carolina were instances in which the persons on the two forms were identical. The rest of the cases required resolution of different rosters to obtain the Census Day residents.

The Telephone Questionnaire Assistance operation had a sizeable portion (approximately 30 percent) of its workload that could be attributed to the mailout of the replacement questionnaire. However, approximately 83 percent of those calls related to the replacement mailing made use of the automated Interactive Voice Response system only rather than being transferred to an operator.

The majority of respondents in all sites and enumeration areas did not seem to have a tendency to hold questionnaires until Census Day. The majority of forms in all cases were checked in prior to April 18. In Sacramento that majority was approximately 74.9 percent and in the mailout/mailback portion of South Carolina that majority was approximately 73.2 percent. In the update/leave portion of South Carolina, about 80.0 percent of the mail returned questionnaires had been checked in by Census Day, and that portion was approximately 78.8 percent in Menominee. It follows that in the mailout/mailback areas respondents more often returned the initial questionnaire than the replacement questionnaire, since the replacement questionnaire was not delivered until around Census Day. Once the replacement questionnaire was delivered, though, a slight majority of nonrespondents up to that point in the short form universe used the replacement questionnaire. The majority of nonrespondents up to that point in the long form universe, though, did return the initial questionnaire, indicating that people were more likely to have procrastinated completing the long form and thus still had the initial questionnaire in their possession upon the arrival of the replacement questionnaire. In the update/leave areas, respondents tended to return the long forms at a slower pace relative to the short forms as well.

The use of the targeted language questionnaires was definitely a convenience for some respondents, as 10.6 percent and 14.8 percent of the respondents in the Spanish and Chinese targeted areas, respectively, returned only a non-English questionnaire. The fact that this was a relatively small portion of the targeted universe might imply the need for a better targeting procedure that identifies those who will use the non-English forms. However, this conclusion is limited by the fact that this operation was non-experimental.

With 90 percent confidence we concluded that mailout/mailback housing units chosen from Kershaw, Richland, or either county was less likely to respond to the dress rehearsal if they had been included in the American Community Survey. We concluded that a mailout/mailback housing unit included in the American Community Survey and selected from Kershaw county was more likely to respond to the dress rehearsal if its American Community Survey experience was further in the past. For Richland county alone we could not draw this conclusion. However, for the combined sample of these counties, we concluded that a housing unit was more likely to respond if its American Community Survey experience was further in the past. We also concluded that a mailout/mailback housing unit that had responded to the American Community Survey was more likely to respond to the dress rehearsal than a housing unit that had not responded to the American Community Survey. For the update/leave areas of South Carolina, the data was mostly inconclusive. However, we were able to conclude with 90 percent confidence that a housing unit that had responded to the American Community Survey was more likely to respond to the dress rehearsal than a housing unit that had not responded to the American Community Survey.

The division of update/leave housing units according to whether the ZIP code included only update/leave housing units or both types of enumeration areas does not represent a random sample, and there was no control for this experiment. Consequently it is difficult to draw conclusions from the resulting response rates. Update/leave housing units in the entirely update/leave ZIP Codes had a lower response rate than the update/leave housing units in the split ZIP Codes. This does not merit the conclusion that the pre-notice letter and reminder post card actually depressed response rates, since those housing units in split ZIP Codes were probably more similar to mailout/mailback housing units in household composition and behavior than were those housing units that were members of entirely update/leave ZIP Codes. Also, undeliverability rates in update/leave areas could feasibly have dramatically affected the response rates. Yet another influence that should be considered is the fact that the pre-notice letters and reminder post cards in these areas were addressed to “postal patron” and delivered using third class postage. This methodology had not been attempted in previous census studies, and it might have caused respondents to be more inclined to view the items as junk mail. Further study that compares the response rates of update/leave housing units with 1990 Census response rates or expected dress rehearsal response rates would be warranted to determine if the pre-notice letter and reminder post card actually increased response rate.